

ABSTRACT OF THE DISCLOSURE

This invention relates to a highly efficient artificial low-density lipoprotein (LDL) carrier system for the targeted delivery therapeutic agents across the blood-brain barrier (BBB). In particular, this invention relates to artificial LDL particles comprised of three lipid elements: phosphatidyl choline, fatty-acyl-cholesterol esters, and at least one apolipoprotein. The present invention further relates to compositions, methods and kits comprising artificial LDL particles for targeting drugs to and across the BBB for the prevention and treatment of brain diseases.